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RESEARCH ARTICLE

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Typification of the name *Allium cirrhosum* Vand. (Amaryllidaceae)

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Abstract

The name *Allium cirrhosum* is here lectotypified based on an unpublished illustration preserved at University of Pavia Library. The lectotype does not include a complete set of significant distinguishing features and cannot be critically identified for purposes of the precise application of the name. Hence, an epitype preserved at PI was selected to serve as an interpretative type. Based on the typification here proposed, the name *A. cirrhosum* has priority at species rank over *A. coloratum* (1771 *vs.* 1825).

Keywords

Alliaceae, epitype, lectotype, nomenclature, taxonomy

Introduction

The genus *Allium* L. is one of the richest genera of Amaryllidaceae J.St.-Hil., comprising about 1,000 species worldwide distributed (POWO 2025[+]; WFO 2024[+]). It is naturally distributed in temperate, semi-arid, and arid regions of the Northern Hemisphere (Friesen et al. 2006). The center of diversity of the genus extends from the Mediterranean basin to Central Asia, and a third smaller center is in the western North America (Friesen et al. 2006; Nguyen et al. 2008; Li et al. 2010).

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Allium cirrhosum was first described by Domingo [Domenico] Vandelli (1771) from northern Italy and, specifically, from the mountains occurring in the surroundings of the city of Milan (Lombardy region). Since 1771, this name has been variously interpreted (as a synonym, a distinct species or a variety), but often regarded as conspecific with *A. coloratum* Spreng. (= *A. pulchellum* G.Don. *nom. illeg.*) (e.g., Fiori 1923 under *A. carinatum* var. *cirr[h]osum*; Stearn 1980 under *A. carinatum* subsp. *pulchellum*; Pignatti 1982 under *A. cirrhosum*; Dimopoulos et al. 2013 under *A. cirrhosum*; Tison and de Foucault 2014 under *A. coloratum*; Pignatti et al. 2017 under *A. carinatum* subsp. *pulchellum*; POWO 2025[+] under *A. cirrhosum*). In the two Italian checklists of vascular flora (Bartolucci et al. 2018, 2024), the name *A. coloratum* Spreng. (syn. *A. cirrhosum* auct.) was accepted at specific rank following the taxonomic treatment proposed by Jauzein and Tison (2001), in which *A. cirrhosum* was considered as a critical taxon and tentatively assigned to the *A. ampeloprasum* group. The purpose of this study is to clarify the taxonomic identity of *A. cirrhosum* through its typification.

The present research is part of the ongoing project aimed at typifying all taxa described from Italy and recognising their *loci classici* in order to serve as a basis for further taxonomic studies (Domina et al. 2012; Passalacqua et al. 2014; Peruzzi et al. 2015, 2019; Brundu et al. 2017).

Material and methods

We analyzed the relevant literature on the name *A. cirrhosum* and searched the original material in LISU, where the Vandelli's main collection is housed (Stafleu and Cowan 1986), LINN, P, PAD, PAV, and PI (codes according to Thiers 2025[+]), primarily available through online resources (i.e., Herbarium Horti Botanici Pisani, PI: https://erbario.unipi.it/it, https://www.jacq.org/; Herbarium Linnaeus, LINN: https://linnean.access.preservica.com/; RECOLNAT: https://explore.recolnat.org/search/botanique/type=index). The articles cited in the text follow the Shenzhen Code (hereafter reported as "ICN"; Turland et al. 2018).

Typification of the name

***Allium cirrhosum* Vand., Fasc. Pl.: 11(1771).**

≡ *Allium carinatum* var. *cirr*[*h*]*osum* (Vand.) Fiori, Nuov. Fl. Italia 1(2): 269 (1923). Lectotype (designated here).—[unpublished illustration] T. XX in the "Saggio d' Istoria naturale del Lago di Como, della Valsasina ed altri luoghi lombardi" preserved at the University Library of Pavia (Fig. 1) and published in VV. AA. (1989, p. 50); Epitype (designated here):—[Italy, Lombardia] Ballabio, Val Sassina, lac di Como, 10 July 1899, *Gysperger H. s.n.* (PI-GUAD 025129; the image of the epitype is available at https://pi.jacq.org/PI025129).

= *Allium coloratum* Spreng.; Syst. Veg., ed. 16 [Sprengel] 2: 38 (1825). Type: see comments in Jauzein and Tison (2001).

= *Allium pulchellum* G.Don; Mem. Wern. Nat. Hist. Soc. 6: 46 (1827), *nom. illeg.* ≡ *Allium flavum* var. *pulchellum* Regel; Trudy Imp. S.-Peterburgsk. Bot. Sada 3(2): 188 (1875) ≡ *Allium flavum* subsp. *pulchellum* (Regel) K.Richt. in Pl. Eur. 1: 206 (1890) ≡ *Allium carinatum* subsp. *pulchellum* (Regel) Bonnier & Layens; Tabl. Syn. Pl. Vasc. France 299 (1894) ≡ *Allium carinatum* var. *pulchellum* (Regel) Fiori in Fiori & Paoletti, Fl. Italia 1(1): 197 (1896) Type: see comments in Jauzein and Tison (2001).

Nomenclatural note. Vandelli (1771: 11) described *A. cirrhosum* providing a short diagnosis ("*Allium caule planifolio, umbellifero, staminibus filiformibus flore duplo longioribus, spatha cirrhosa*"), a detailed description ("*Caulis tripedalis, teres. Folia alterna plano-canaliculata, vaginis teretibus. Umbella conglobata, sparsa. Spatha ad caulem divisa, & sensim attenuata in cirrhum longum 3. aut 4. pollices. Pedunculi longi fere 2. pollices. Petala ovato-acuminata, concava, purpurascentia. Filamenta exalbida, corolla duplo longiora. Antherae lutheae*") and the provenance ("*Habitat* in Montibus Mediolanensibus"); no herbarium specimen or illustration were cited. We performed a survey of the original material at LISU, where the Vandelli's main collection is housed, as well as at LINN, PAD, PAV, and P, where additional material can be found (Stafleu and Cowan 1986). We traced at LISU eight herbarium specimens (without collecting localities, date, and collector name) but none with the name *A. cirrhosum*. No relevant material was traced in LINN, PAD, PAV, and P. Thus, we were not able to trace any herbarium specimens belonging to the original material.

Some very interesting information can be inferred by reconstructing the history of Vandelli's peregrinations around Milan. In particular, he undertook a survey in the surroundings of Come Lake from May 20th to August 31st 1763 together with Giulio Mattiazzi, on behalf of Count Carlo G. di Firmian (Austria's Minister in Milan), collecting mineral and biological samples (see Provasi 1923). Vandelli compiled a travel journal that he entitled "Saggio d'Istoria naturale del Lago di Como, della Valsasina ed altri luoghi lombardi" (= Essay on the natural history of Lake Como, Valsassina and other places in Lombardy), in which he reported all the plants observed and described some new species providing descriptions and illustrations. Vandelli was never able to publish his manuscript, but in 1771 he described some plants new to science in "*Fasciculus plantarum cum novis generibus et speciebus*", many of which collected "*in montibus*" or "*in alpibus mediolanensibus*" (e.g. *Aretia multiflora*, *Campanula firmiana*, *Allium cirrhosum* etc.), probably during his journey in 1763. The original manuscript of Vandelli is lost, but a copy of it is still extant (probably the only one left) kept at the Library of the University of Pavia (Provasi 1923; VV. AA. 1989). This copy was published in part without all the illustrations by Provasi (1923) and later published in full including all the illustrations (VV. AA. 1989). In his travel journal (1763) Vandelli described and illustrated (Table XX) an *Allium* seen on August 14 in the valley of "Boaccio [Boazzo] or Caldone". The description of this *Allium* matches those published by Vandelli (1771) in the protologue of *A. cirrhosum*. Consequently, we can consider the Table XX, certainly made before 1771 and probably by Vandelli himself,

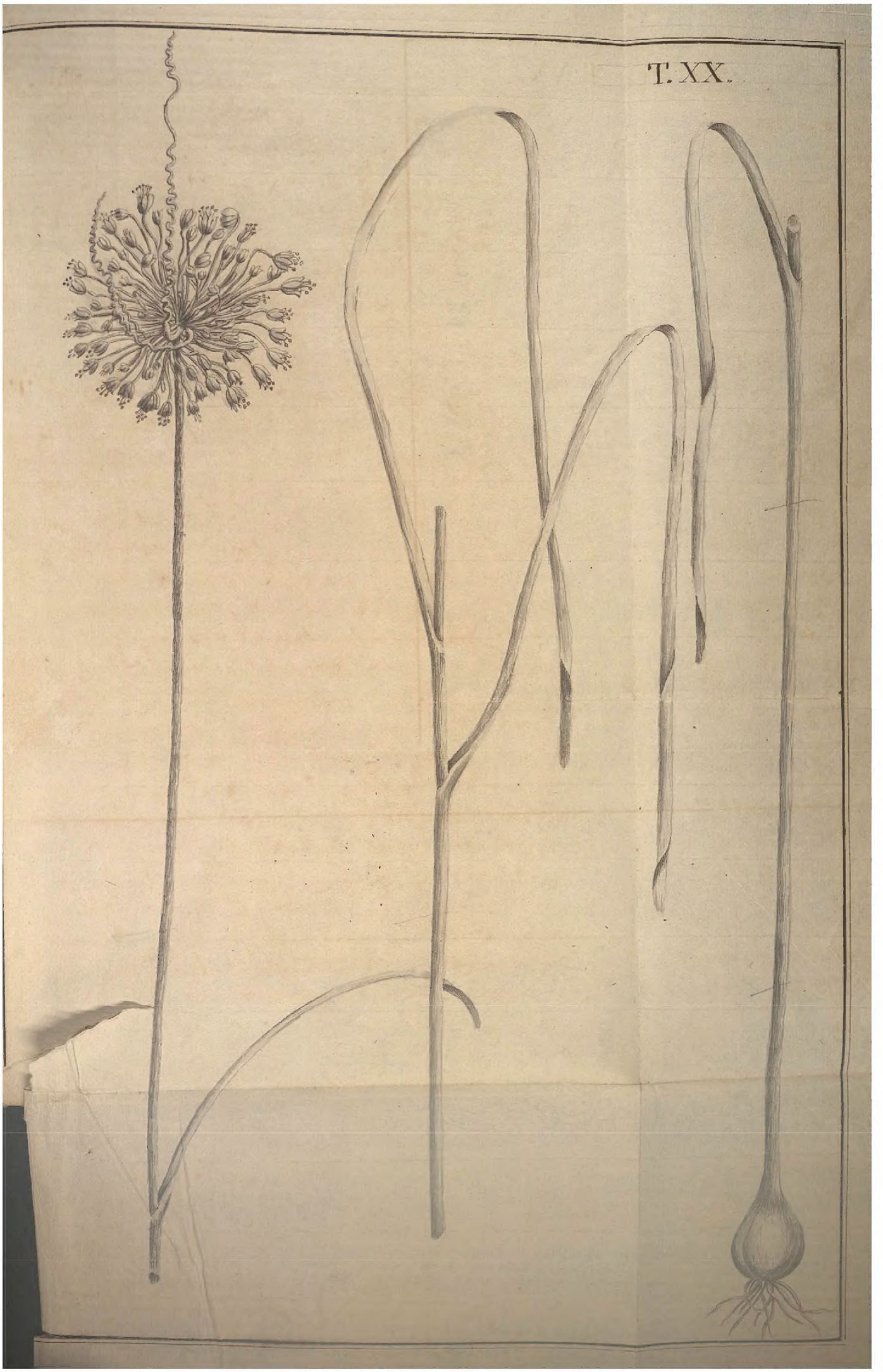

Figure 1. Original table (T. XX) of the unpublished manuscript of Vandelli preserved in the University of Pavia Library (by courtesy of the University of Pavia Library – Ministry of Culture).

as part of the original material for the name. Given the absence of extant herbarium specimens, this Table is the obligate choice for the lectotypification of Vandelli's name (Arts. 9.4 and 9.12 of the ICN). The lectotype does not include a complete set of significant distinguishing features (e.g., the morphology of the spathe, the color of tepals and antheres, length of the stamens) and cannot be critically identified for purposes of the precise application of the name. According to the Art. 9.9 of ICN, an epitype preserved at PI (PI-GUAD 025129), collected by Gysperger in the same area visited by Vandelli in 1763, was selected to serve as an interpretative type.

Taxonomic note. According to Cesati (1842: unpaginated), the plant described by Vandelli was referable to *A. paniculatum* L., a name mistakenly used by Italian authors to indicate *A. longispathum* Redouté (Salmeri et al. 2016; Bartolucci et al. 2024). Later, Scopoli (1876: 82) commented on Table XX of the Vandelli's manuscript and wrote: "Ex data descriptione agnosci non potest" (= It cannot be identified from the given description). Some doubts may arise on the exact identification of the plant described by Vandelli regarding some characters that are not usual to be present in *A. coloratum*, such as for example the height of the plant [*caulis tripedalis* (3 feet = about 98 cm)], the morphology of the spathe [*spatha ... attenuata in cirrhum* (= spathe attenuated in a narrow curled appendage)], and the color of the anthers [*antherae lutheae* (= yellow anthers)]. Rarely, *A. coloratum* may exceed 60 cm, have spathes ending in a narrow curled appendage (usually contracted into a long slender uppendage) and yellowish anthers (usually purple), while all other characters reported in the description of *A. cirrhosum* correspond with the current conception of *A. coloratum* (Stearn 1980; Jauzein and Tison 2001; Dimopoulos et al. 2013; Tison and de Foucault 2014; Pignatti et al. 2017; Bartolucci et al. 2024). Accordingly, based on the typification here proposed the name *A. cirrhosum* Vand. has priority at species rank over *A. coloratum* Spreng. (published by Sprengel in 1825).

Regarding the taxonomic status to be attributed to *A. cirrhosum*, we agree with the taxonomic treatment proposed by Jauzein and Tison (2001 under *A. coloratum*) who recognize this taxon at the species rank, a status also accepted in several authoritative national floras and taxonomic databases (Dimopoulos et al. 2013; Tison and de Foucault 2014; Bartolucci et al. 2024; POWO 2025[+]; Portal to the Flora of Italy 2025[+]).

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